



Green Requirements

February 2, 2006

Open Space
Impervious Surfaces
Screens
Landscaping

Green requirements refer to those regulations in a zoning ordinance that mandate that the land have some vegetative cover versus some manmade covering (buildings, asphalt, cement, etc.).

There are a number of green space requirements in the current zoning regulations. In addition, there are a number of alternative green regulations that can be included in the zoning revision. Each section below will explain both the current Rockville requirements and possible alternative solutions to be incorporated in the zoning revision. In particular, this paper addresses open space, impervious surfaces, screens, and landscaping.

Why Green Requirements?

- ◆ Require sufficient open space in future developments
- ◆ Limit impervious surfaces in the City
- ◆ Provide design manual for landscaping / screens



Rockville prides itself on its natural covering as much as its built environment. The zoning revision is an opportunity to ensure that the green requirements are preserved, encouraged, and enhanced. These green areas may be requirements of open space (parks, golf courses, setbacks, etc.), regulations to prevent the negative implications of impervious surfaces, or provisions for adequate screening or landscaping.

The Mayor and Council have stated that their concern with regard to green requirements, such as impervious surfaces, is both aesthetic and environmental. Regulations can be drafted which address both these issues. Providing adequate green space in the City will provide a pleasant atmosphere in which the City's residents and commercial developments feel comfortable. In addition, vegetation will help protect the air quality, water quality, and wildlife of Rockville. Green requirements ensure that citizens and visitors have areas to congregate, relax, or take part in a sport. Through this paper, the discussion has been how to maintain these areas and to encourage the development of more green space in the City.

The key points of the recommendations are those listed here.



Open Space

- ♦ Common areas of a City
- ♦ Need to clarify definition / requirements
- ♦ Types
 - Parkland
 - Golf Courses
 - Tot Lots
 - Courtyards
 - Storm water Management Ponds
 - Greenways
 - Non-lot covered sections of residential lots

Currently the definitions used in the City can include hardscaping and vegetative covering – requirements of new developments do not clarify the type of open space to be required – number of different types – parks, playgrounds, tot lots, greenways, storm water management areas, landscaping isles, etc. All have different ways to use them – to ensure that the City is getting the types of open space they want to see in the City, need to be clearer about it in the zoning ordinance.

Open Space Zone

- ◆ Requires “change or mistake” to allow residential / mixed use development
- ◆ Preserves parkland indefinitely
- ◆ One or multiple levels of open space zone
 - Placed on whatever type / size parks
 - Allow whatever uses / range of uses



Some communities have implemented an OSZ to preserve and enhance public and private recreational areas. These allow local governments to regulate where, when, and how new parks are developed. More importantly, it restricts changes in parkland. An open space zone would restrict the ability of the City to sell this land for other purposes.

Currently, most open spaces in the City are zoned Res. If these areas were to be developed, they may do so as long as they meet the development requirements for the residential zone in which it is designated. An OSZ, would require a strict finding of “change or mistake” in MD to rezone the property to a district that would allow development. This requires rezoning to be based on a finding that there was 1) a mistake in the original zoning or 2) that the character of the neighborhood changed to justify the amendment. It is a difficult standard and often leads to the prohibition of a rezoning.

A.Location - OSZ can be placed on any area that City deems appropriate. Since undeveloped land reduces densities, large contiguous open space should not be located around mass transit centers. Linear, transit-oriented open space should be provided in these areas such as pedestrian or bike paths leading to/from the centers.

B. Uses - Uses within an OSZ are limited. There may be only 1 OSZ in a community where general uses are allowed *or* there may be different Open space zones with specific uses associated with each. Generally these include 1) agricultural uses, 2) campgrounds, 3) golf courses, 4) parks, or 5) other recreational uses. Development may be allowed, such as 1) day care centers, 2) greenhouses, 3) retail or service uses 4) cultural centers (including entertainment venues), and/or 5) museums.

Impervious Surface Concerns

♦ Aesthetic

- Pave over front yard
- Lack of vegetation

♦ Environmental

- Flooding
- Water Pollution
- Loss of Groundwater
- Heat Island Effect
- Health Hazards



There are two concerns with regard to impervious surfaces. The first is aesthetics. The Mayor and Council have expressed repeated concerns over the ability of property owners to pave over their entire yard. While some might appreciate the reduced need to cut grass, this is not the character of neighborhoods that the Mayor and Council would like to encourage in the City.

A. **Flooding** - A greater quantity of rainwater runs off parking lots and other impervious (paved/pavement-like) surfaces. This larger quantity can lead to more frequent flooding as well as streambed erosion, and changed size of natural water channels.

B. **Water Pollution** - Runoff also collects pollutants as it flows such as salt, petroleum products, excess nutrients, and chemicals and carries them into adjacent wetlands and water bodies. Water quality is, therefore, impacted. In addition, as mentioned before the “heat island effect” can increase the temperature of the water that is deposited into these wetlands and water bodies, which can negatively impact the life within the water systems.

C. **Loss of Groundwater** - Impervious surfaces prevent or inhibit water from naturally seeping into the soil and recharging groundwater supply.

D. **Health Hazards** - Improperly graded impervious surfaces can also collect stagnant water, which can become a breeding ground for mosquitoes with the associated nuisance and human health hazards.

Residential

- ◆ No current limitation on paving
- ◆ Definitions of impervious different
 - Aesthetics
 - Environmental (storm water)
- ◆ Permitting
- ◆ Other Code controls



Currently, there is no limitation on the ability to pave over an entire residential yard. The current lot coverage limitations control only building footprint on a lot, and not paving materials.

Definitions – the types of lot coverage materials that may be controlled for aesthetics may not be the same as for environment. Pools are not considered impervious for purposes of storm water management because they do not cause water runoff (there is often space for extra water to fill in the pool before it runs off). Pools are an aesthetic issue and cut into the amount of green space on a lot. Similarly, plastic sheeting used to line flowerbeds is hidden under soil and does not cause aesthetic concern. This sheeting does prevent penetration of water into the ground and is considered impervious for environmental issue.

Permitting - The City does not have the ability to keep track of paving like driveways or patios.

Other Code Controls - A concern is the runoff of water from 1 residential property onto neighbors' property. Storm water management is addressed in other sections of City code (Chapter 5). The increase in runoff from a change on the owner's yard cannot affect their neighbors. Some form of control is required, be it dry wells or piping the water to the City's storm drains (directly, or via the street gutters). The City requires creating or improving regional storm water mgmt facilities to control runoff and sediment from portions of the City that were developed prior to any substantive storm water control. Regional facilities control storm water from a number of recent developments; however it is not feasible to locate or improve facilities in all developed areas of the City. Most of the CPD projects (KF and Falls Grove) have some degree of storm water and sediment management programs that were approved as part of the initial development.

Residential Alternatives

- ◆ Main Building Lot Coverage
- ◆ Vegetative Covering Requirement



The City does not have a limit on the footprint of the main building on a lot. Other communities, however, have established such regulations. This regulation would limit the footprint of the main building alone.

Vegetative Requirement – ensure lots are developed with the type of green covering the city would like to see.

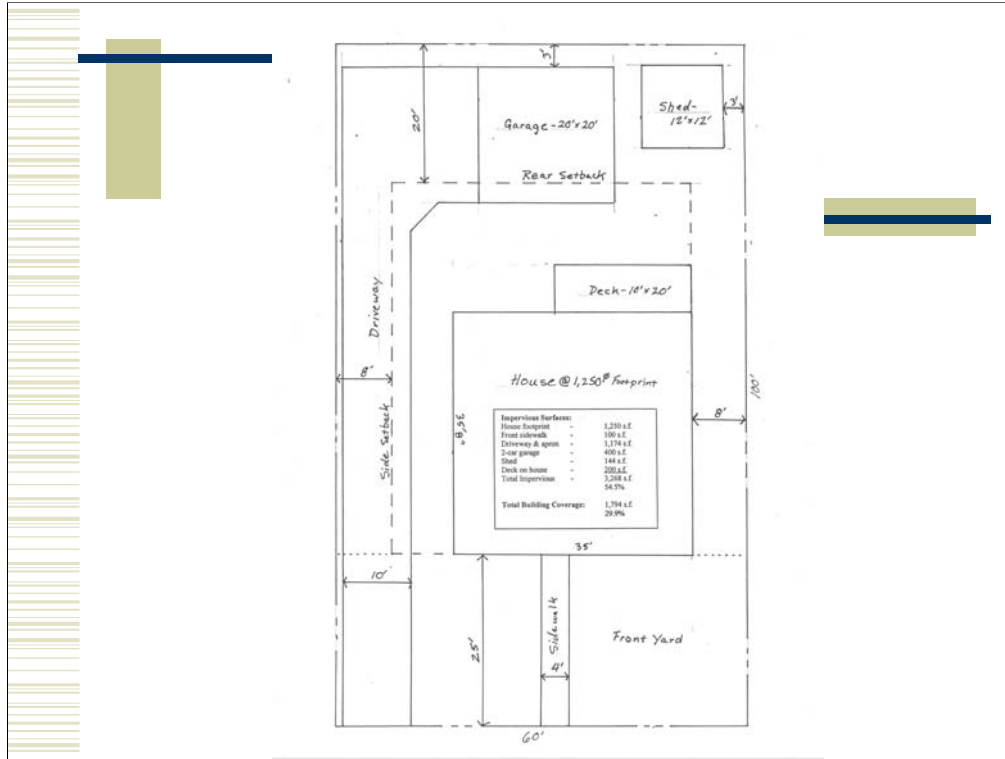
a. Definition – to be determined but would require plant life over hardscaping

b. Enforcement -

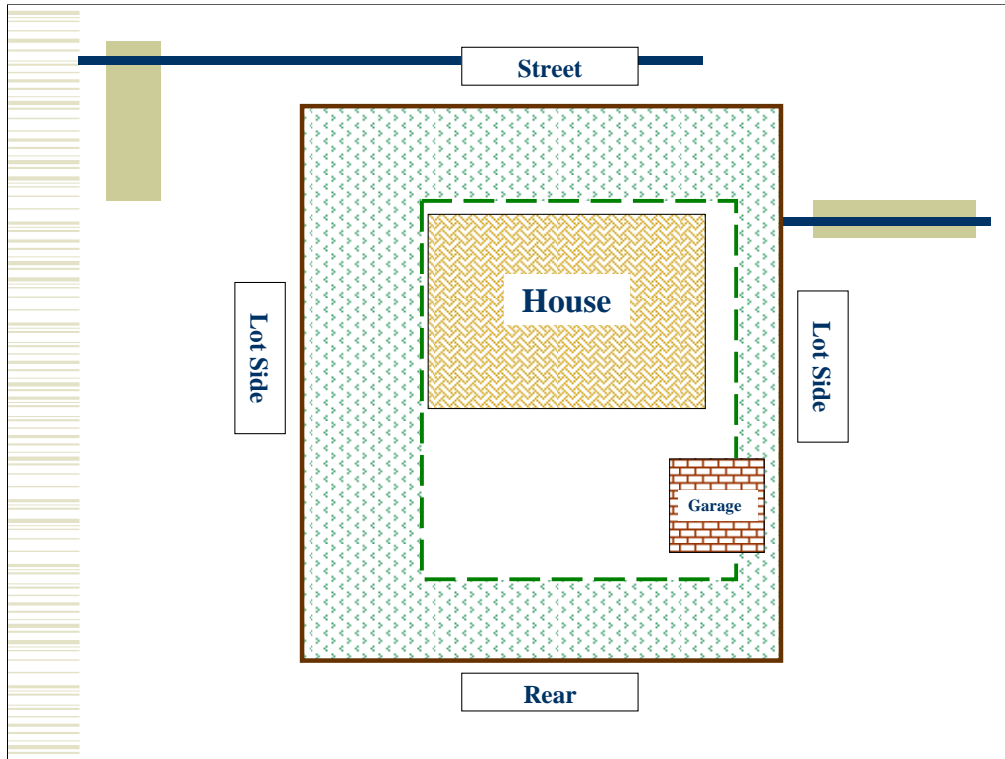
c. Requirement – only in single-family zones, because of small lot nature of multi-family and other mixed use zones; typical R-60 lot with a series of improvements that one could expect for a lot without a built-in garage. These improvements include a 2-car garage with driveway and apron, a garden shed, and a deck. The impervious surface area totals 54.5% of the lot. Of that, 30% is building coverage, well within the 35% allowed in the zone. If the City includes a vegetative coverage requirement, the minimum front yard green area requirement should be set at 60% to 65% (in the R-60 zone), thus allowing enough space for two parking spaces. The rear yard green area minimum would be set at 40%. A sliding scale for the larger lot zones is needed to increase the minimum vegetative area.

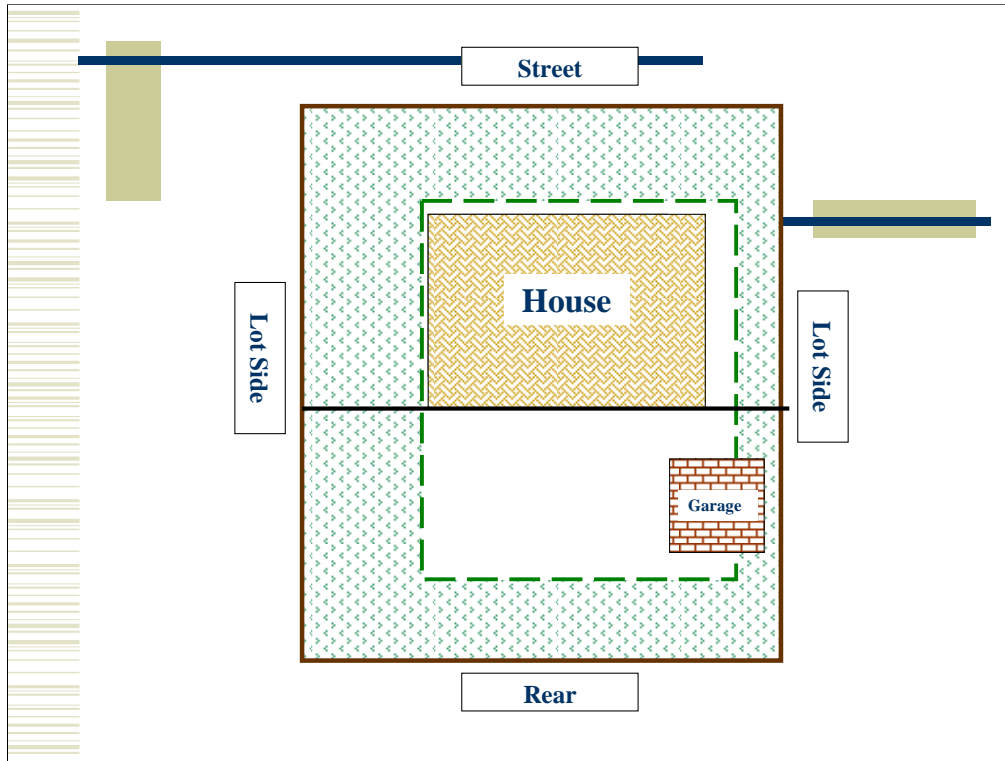
d. In addition, any development created with a special development procedure will need to be considered on a case-by-case basis. One consideration could be to include vegetative requirements as an amenity or as a development regulation to be adjusted when using the Amenity Development Option

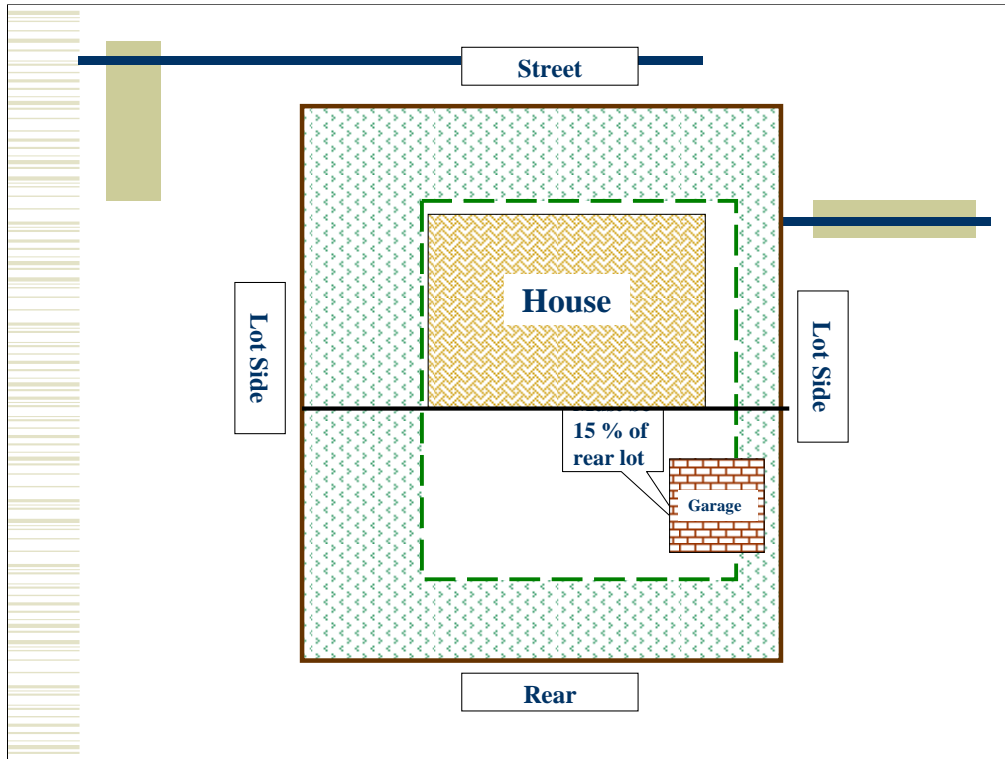
e. This type of regulation is easier to enforce than permitting requirements of impervious surface limitations. If the City of Rockville were to adopt a minimum

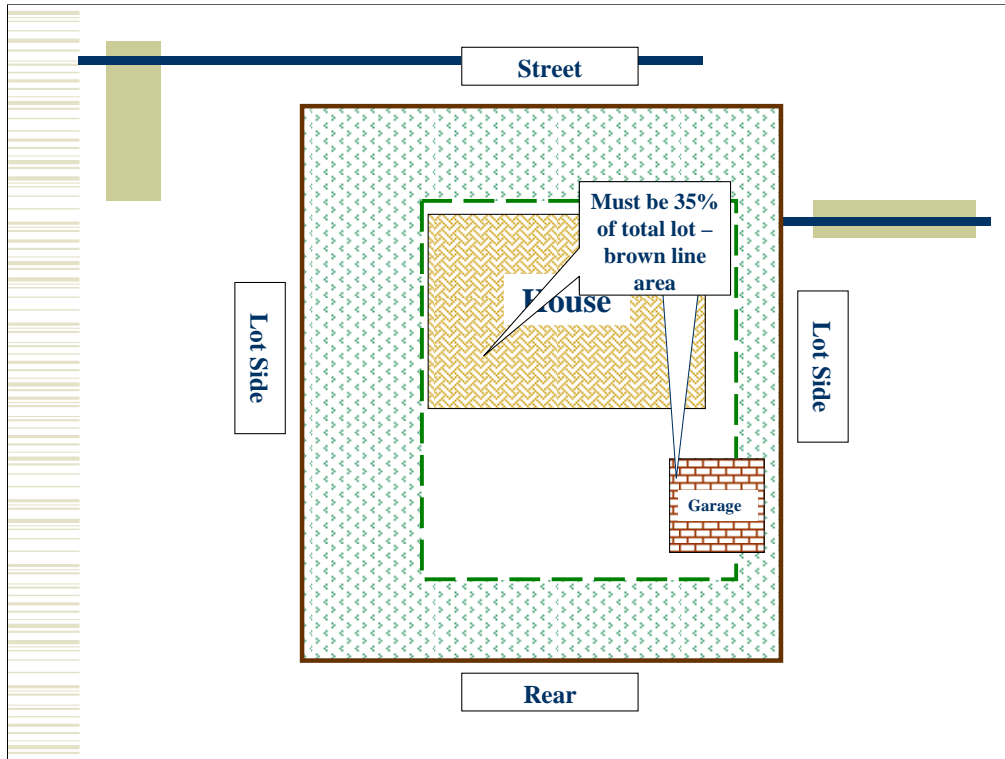


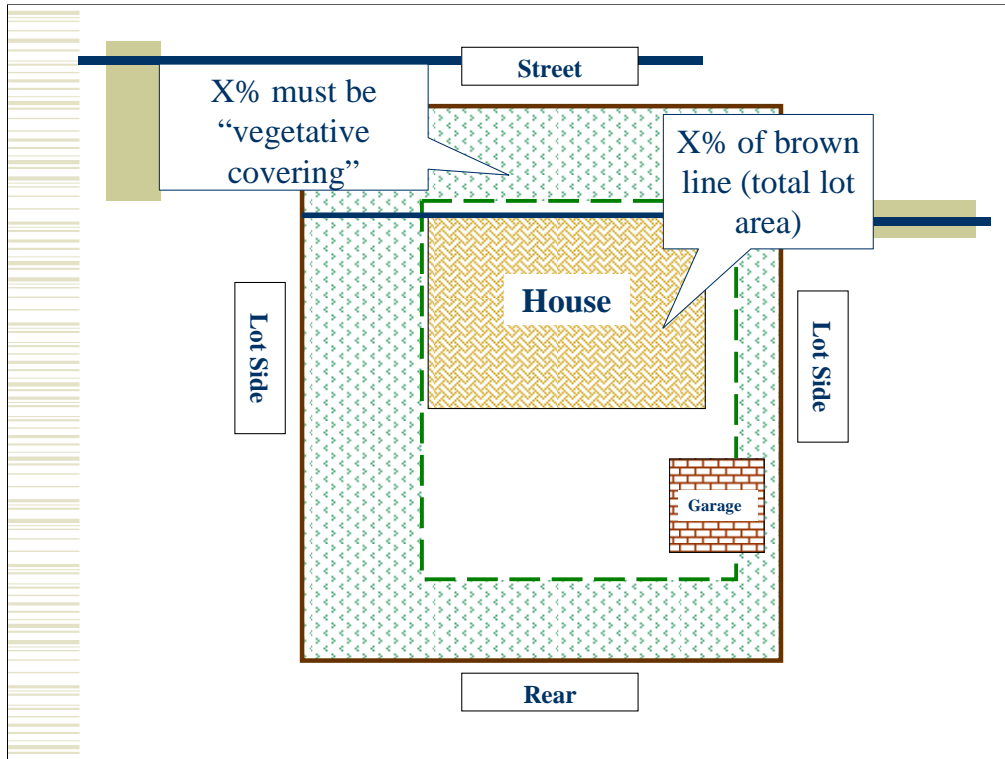
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City-Wide Concerns

- ◆ Conflict of Interests

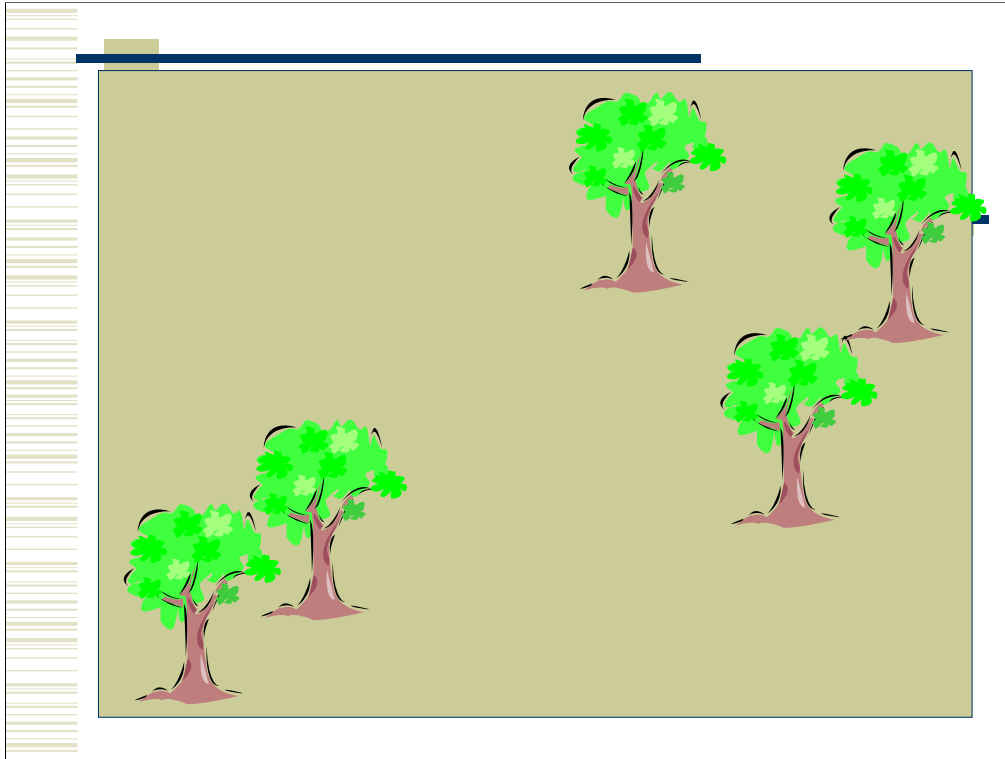
- Save all trees
- Save certain trees
- Save no trees

- ◆ Parking lots

- ◆ Setbacks

- ◆ Sidewalks





This issue has come up a number of times in recent history in the City. The City forester would like us to address this question to you – when presented with a lot with a number of trees located on it, and you want to develop on it you have a number of requirements that may require tearing down some trees

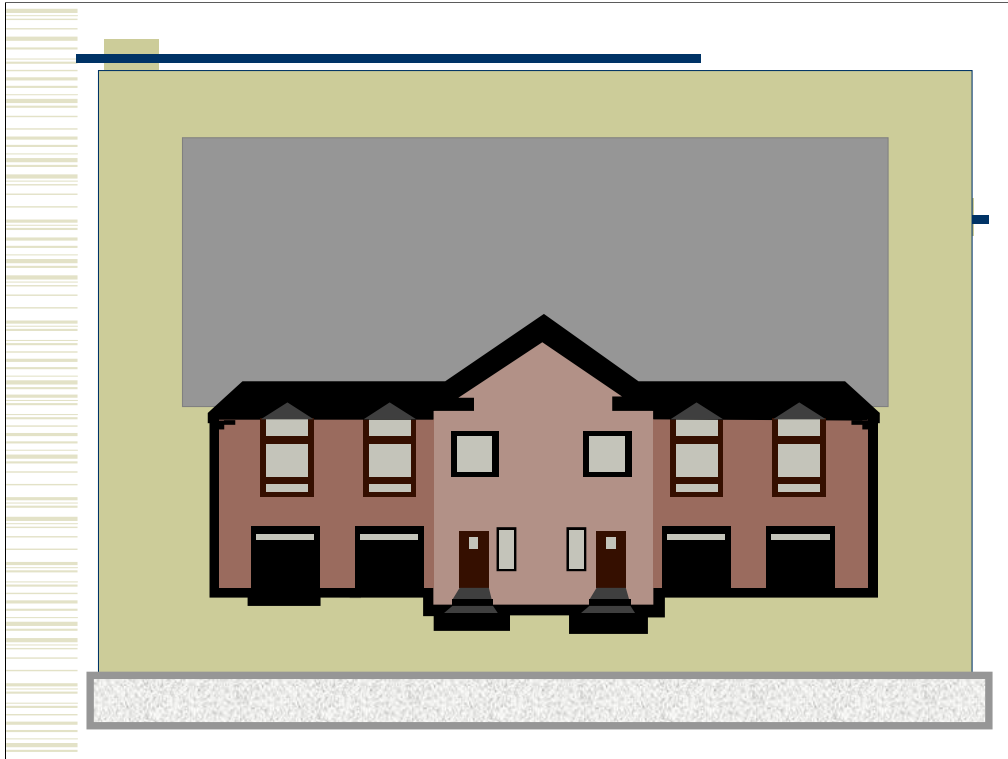


For instance, there are setback requirements that may mean getting rid of a tree or two. . . .









Screens

- ◆ A lot of questions currently left open
 - Type material
 - Where to locate
 - Maintenance



A few things are specifically screened by use and a few things specifically screened by zone in the zoning ordinance. Majority of screens in the City are placed as a condition to approval. There is no guidance in the code, or through other sources, for approving bodies to clarify this condition. Question remains what type of material, where to locate the screens (between all developments – can lead to gated communities); between certain developments (R and R, MU and R, I and R?); and who is responsible for maintaining the screens when sections die / are destroyed / aren't working.

Landscaping

- ♦ A lot of questions currently left open
 - What types of materials (plants / hardscaping?)
 - Maintenance (replace and maintain)
 - Preparation of plans
 - Requirements for different development types



General Recommendations

- ◆ Increase green requirements
- ◆ Clarify green requirement definitions
- ◆ Allow flexibility for change between types of green requirements



To create a quality urban environment, the City needs to increase their green requirements to provide quality open spaces, landscaping, and other natural features.

2. By ensuring that the green requirements definitions provided in the ordinance are clear and reflect the type of green space that the City would like to see, it will be easier to regulate exactly where each type of green requirement will be located. For instance, in urban areas of the City (Town Center and Rockville Pike), paved areas may count as open space. Rooftop gardens, courtyards, and other hardscaping may be sufficient with the right amount of associated plantings to be considered adequate open space. In residential areas, however, impervious hardscaping will be limited.

3. Many storm water management ponds built in the late 1980's are now becoming obsolete. While the City does not want to encourage development on these areas, there should be flexibility provided in the ordinance to change the type of open space in these areas

Open Space Recommendations

- ◆ Require all Planned Development Procedures to provide open space
 - Specify type of open space
- ◆ Do not include open space zone



1. Currently, open space dedication is only a zoning requirement for new developments in the Planned Residential Unit Development. Open Space, however, has been addressed as a condition in large Comprehensive Planned Developments (Falls Grove, King Farm, and Tower Oaks). In accord with the Master Plan recommendations the following should be included in the revision with regard to planned developments:

- Require different open space dedications based on the type of development requested – Percentages should be given in the ordinance stating what portion of each type of open space should be created with a development – active parkland, tree lawns, greenways, tot lot, etc. Some, such as tree lawns, should be required for all new and redeveloped sites. Others may be based on the number of residents generated and/or the needs of the surrounding areas. A matrix showing the various sizes of development and the types of required open space (tennis courts, tot lots, walkways, etc.) to dedicate should be provided. Contiguity of open space should be required if desired by the City. If active open spaces are desired, the requirement should not be met through a number of small, separate sections of landscaping (islands or medians of trees). In addition, a fee in lieu option should be provided, as recommended in the Master Plan.
- Clarify the difference between Public Park and private open space – The current ordinance language for public parks should be more particular so that the dedication requirements are not ambiguous.
- Exclude other open space requirements from parkland requirements - With regard to Falls Grove and Upper Rock developments. a large area of the

Impervious Surface Recommendations

- ◆ For single-family detached districts:
 - Main Building Lot Coverage
 - Vegetative Covering Front Yard Requirement
- ◆ Include amenity for commercial parking
- ◆ Future review of property maintenance code
- ◆ Give direction between:
 - Tree preservation
 - Other Code Requirements



1. Due to the considerations addressed in this paper regarding an impervious surface limitation, staff recommends the above two requirements be added to the Rockville City Zoning Ordinance. At this time, these regulations will be applied to all one-family residential districts, not just the three smallest residential districts where disproportionately sized houses are being built. They will not, however, be applied to existing special developments. Currently existing and future developments like King Farm and Fallsgrove will be considered as a whole and not on an individual lot basis. The conditions usually included in the approval process, coupled with the HOA oversight, should be sufficient to control the great majority of potential problems. Modifications to the HOA open space would generally require approval of an amendment to the original approval conditions, which would give the City that degree of oversight. A consideration of the draft is to allow future special development procedures developments to modify this development requirement, if additional amenities are created (for example, increasing public access open spaces).

Staff recommends that the vegetative covering requirement be limited to the front yard. The street appearance sets the primary character of the neighborhood. This requirement is much more easily recognized and enforced in the front yard than the rear, without the need to gain access to private property. The rear yards will remain as they are now, with coverage based on accessory buildings maximums. Rear yard vegetative covering requirements would be difficult to enforce and could generate ill will on the part of the homeowners.



Screen / Landscaping Recommendations

- ◆ Provide Landscaping / Screening Manual
- ◆ Clarify maintenance requirements for screens
 - Within communities
 - Between communities
 - Between communities and major roads
- ◆ Include amenity of screens within public easements

1. The zoning regulations will reference the need to comply with the design regulations; however the particulars of screening and landscaping requirements will be addressed in the manual. The purpose of this Landscape and Screening Manual will be to enhance the appearance of the City of Rockville by improving the quality of landscaping, buffering, and screening throughout the city.

Screens should be decided on a site-by-site basis; but guidelines should be provided to give deciding bodies standards to be applied throughout the City.

Included in the manual should be requirements for:

- Approved plant list (of native species)
- Depth of Screening
- Maintenance Expectations
- Location of necessary screens

2. Clarify maintenance provisions / standards for screens. Along Wooton Parkway, between Fallsmead and Glenwood Road, there is a buffer of White Pine trees, the lower portion of which have died. As a result, the trees do not act as a sufficient buffer anymore from the passing traffic. As mature trees, they are hard to replace and the shading limits the ability to plant additional buffering plants underneath. The zoning revision is an opportunity to clarify the maintenance requirements of not only whether the City or the neighborhood is responsible for maintaining the buffer but what types of

Questions?

